



# *Lone Tree Overpass Project Update*

City of Flagstaff Mayor & Council Presentation - October 19, 2021





# Presentation Overview

1. Project Overview
2. Traffic Demand Model
3. Intersection Types
4. Greenhouse Gas Analysis
5. Project Aesthetics
6. Path Forward

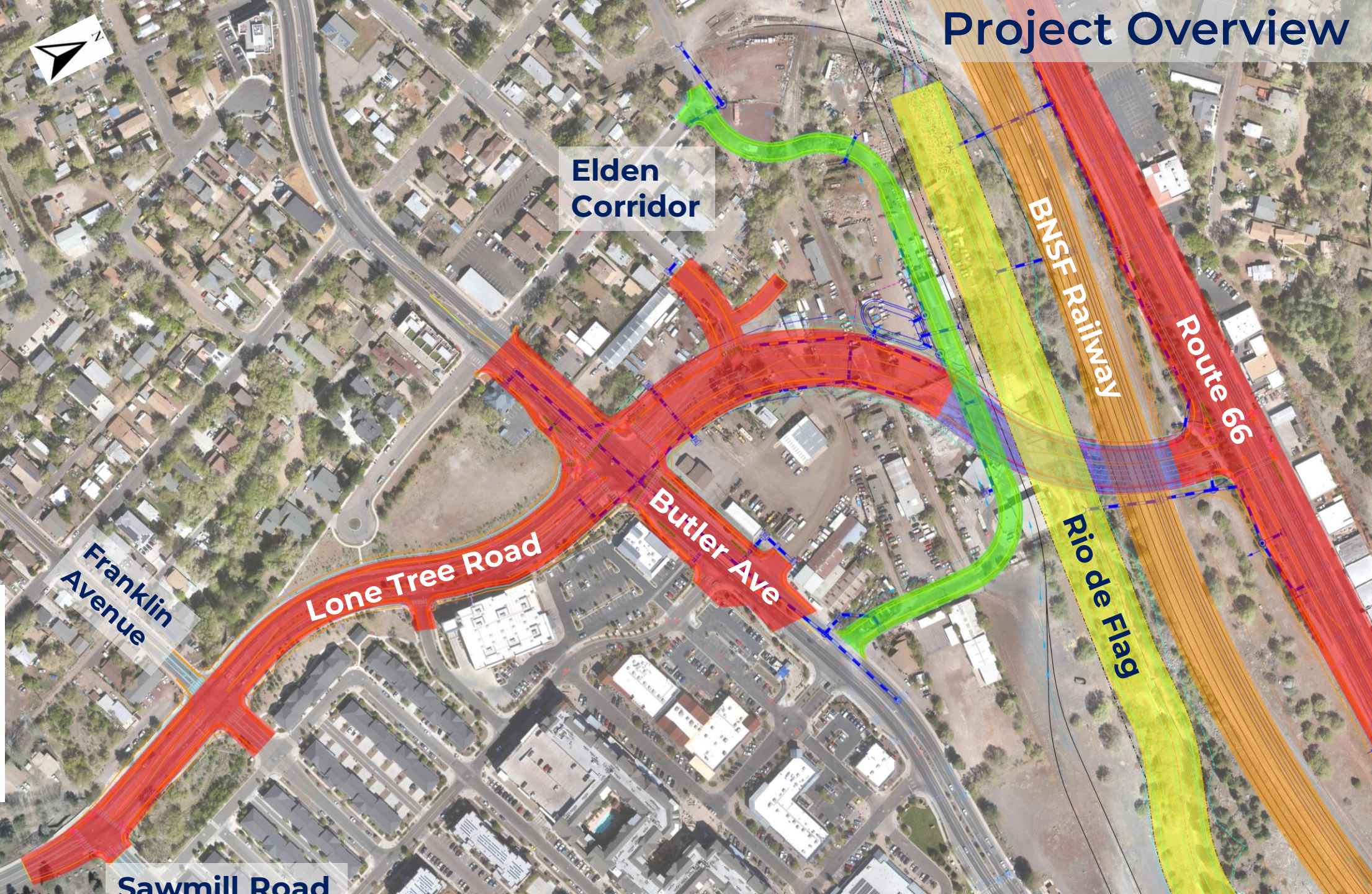
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# Project Overview







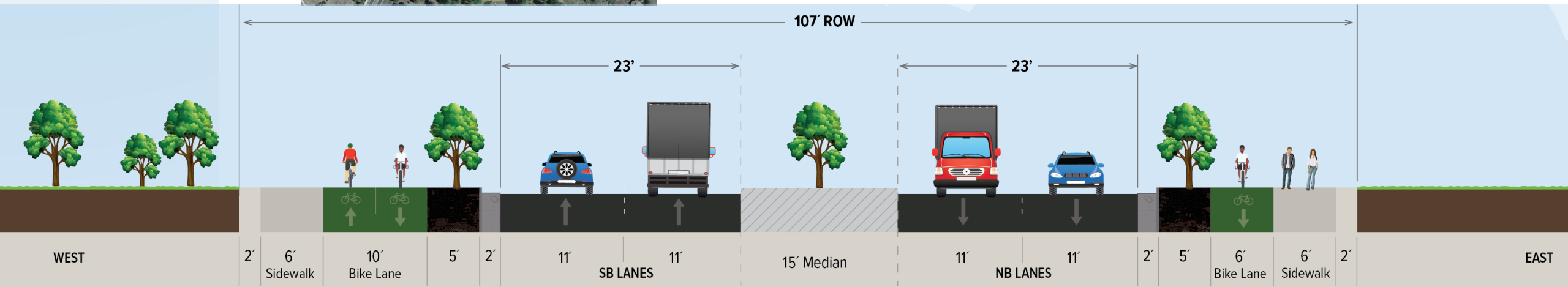
# Project Overview

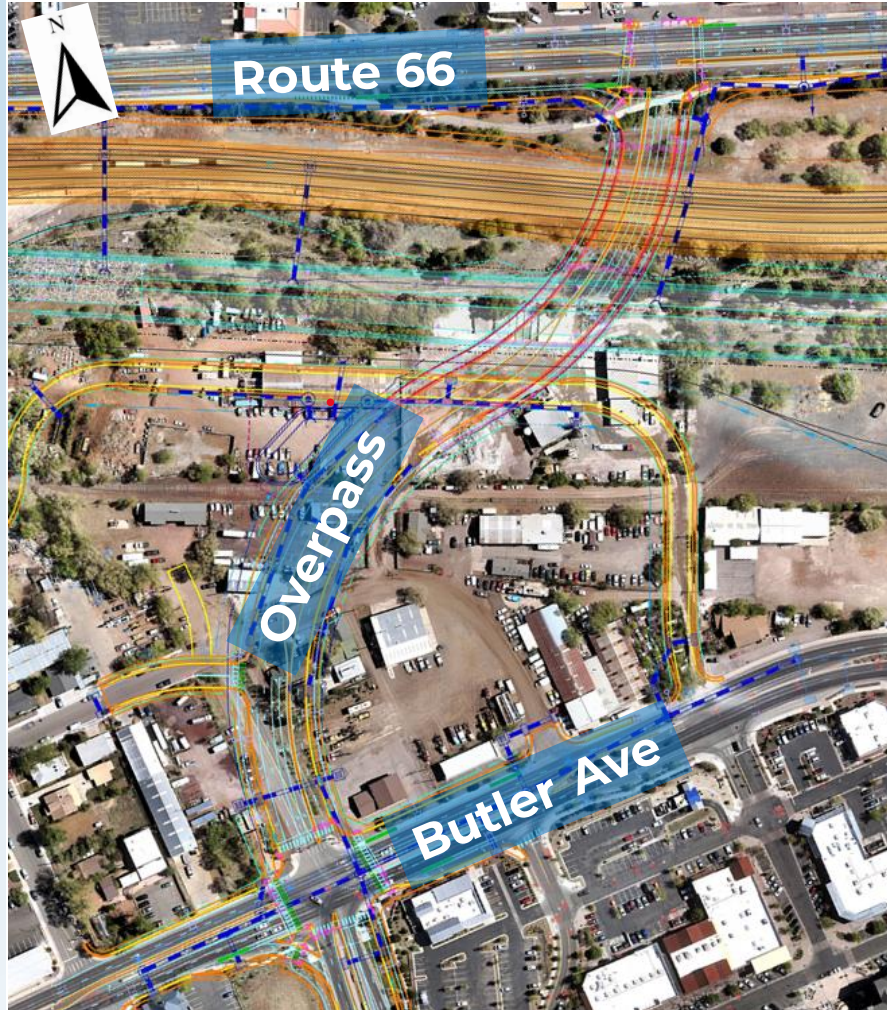




## Lone Tree - Sawmill to Butler

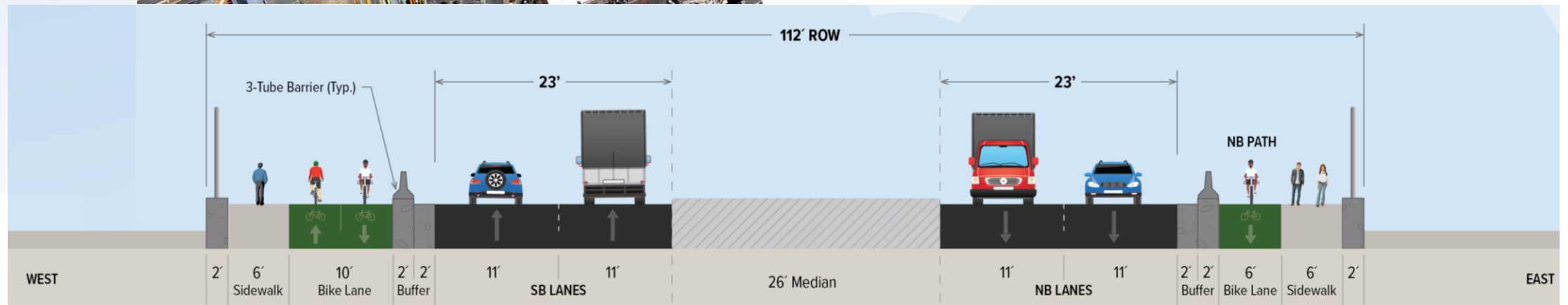
- Two travel lanes in each direction.
- FUTS alignment stays on the west side of Lone Tree Road.
- Warrant Analysis at Franklin and at Sawmill.



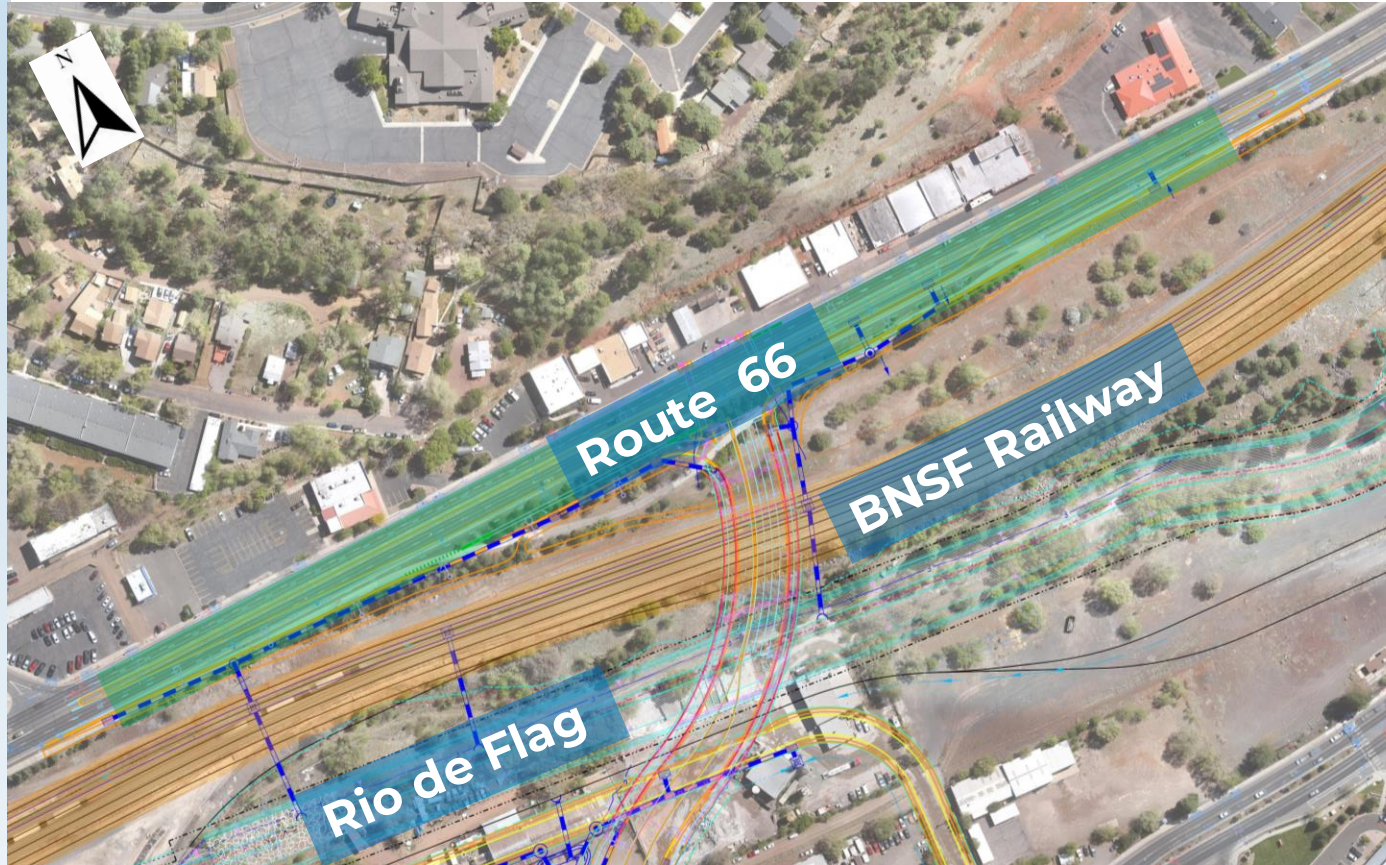


## Lone Tree - Butler to Route 66

- Two travel lanes in each direction.
- FUTS connectivity on west side of bridge.
- Bridge spans over BNSF.
- Railway, future Rio de Flag, and future Elden/Cottage extension.

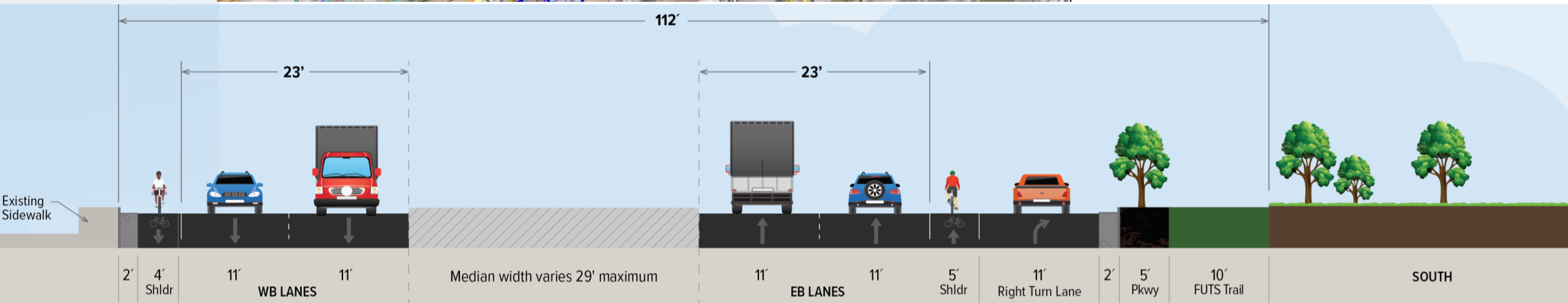






# Route 66 - Elden to East of Lone Tree

- Maintain North Curb Line.
- Connect to future Switzer Canyon FUTS.
- Widen to the South
- End Improvements before Elden St.

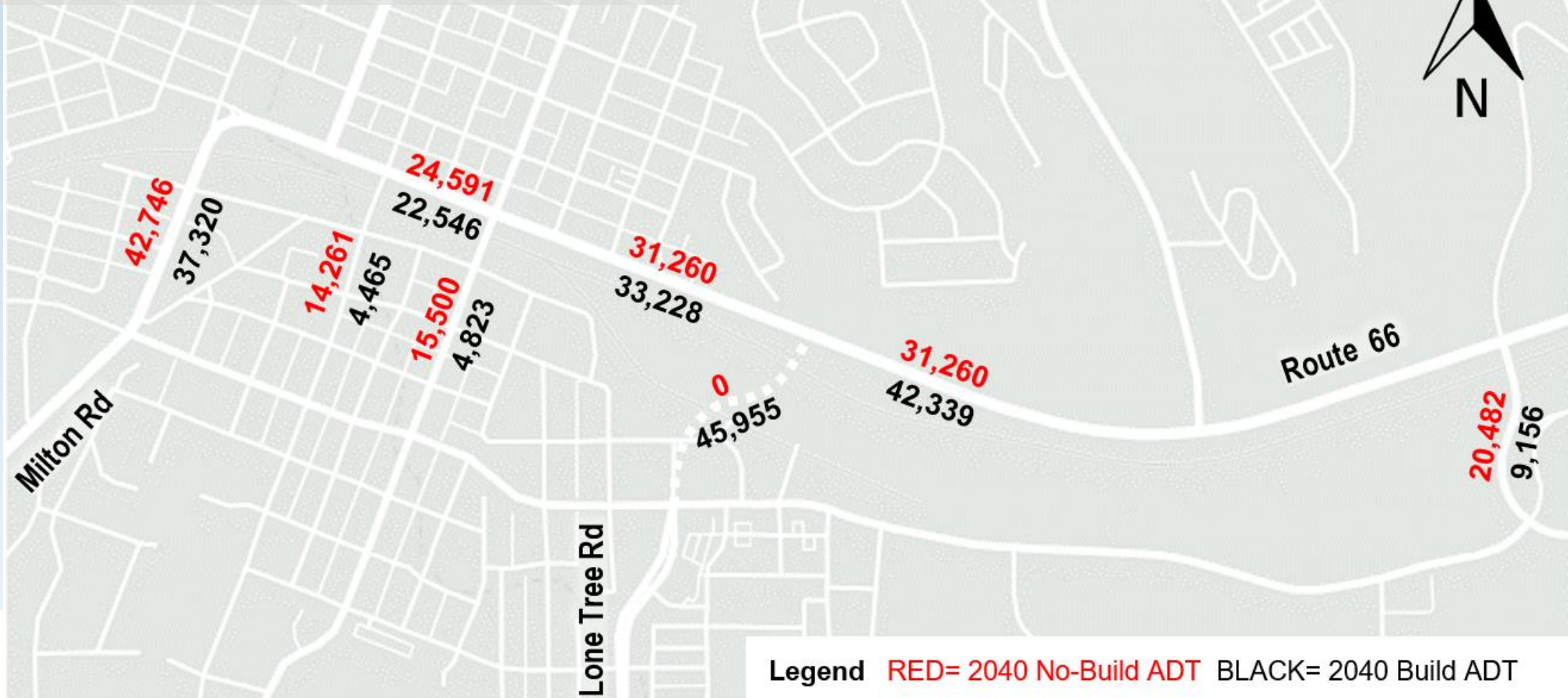


# Travel Demand Model





# Average Daily Volumes



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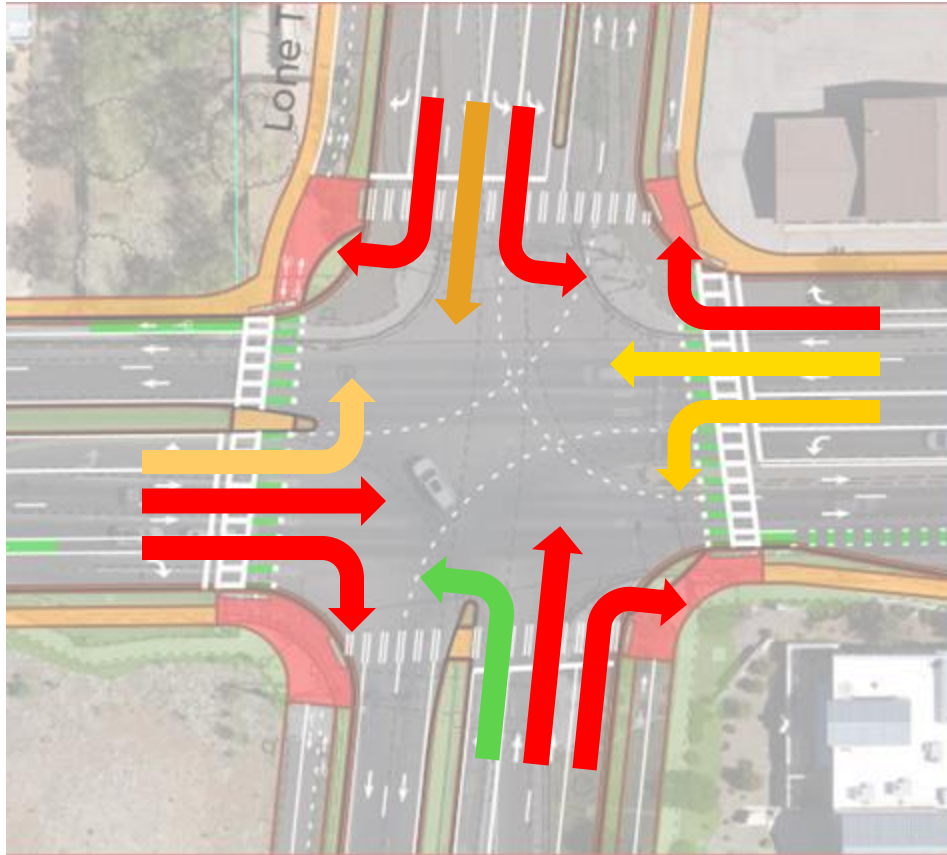
- Lone Tree Overpass is the Preferred Route.
- Improves Operations on Milton and through Downtown.
- Reduces Traffic in Southside on Beaver Street and San Francisco Street, which could provide opportunities to improve multi-modal facilities.



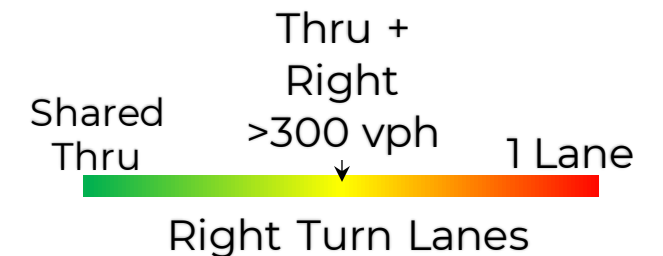
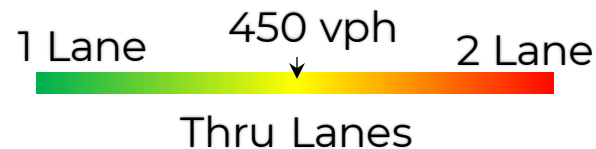
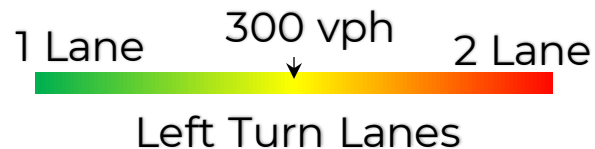
# Intersection Volumes

## 2040 – Build Traffic

- Separate Right Turn Lanes can be considered.
- Thru volumes high enough for more than (1) lane.
- Southbound Lefts are high enough for Double Left Turns.
- Westbound Double Lefts needed with high Eastbound Thru traffic.



**Lone Tree Rd & Butler Ave**

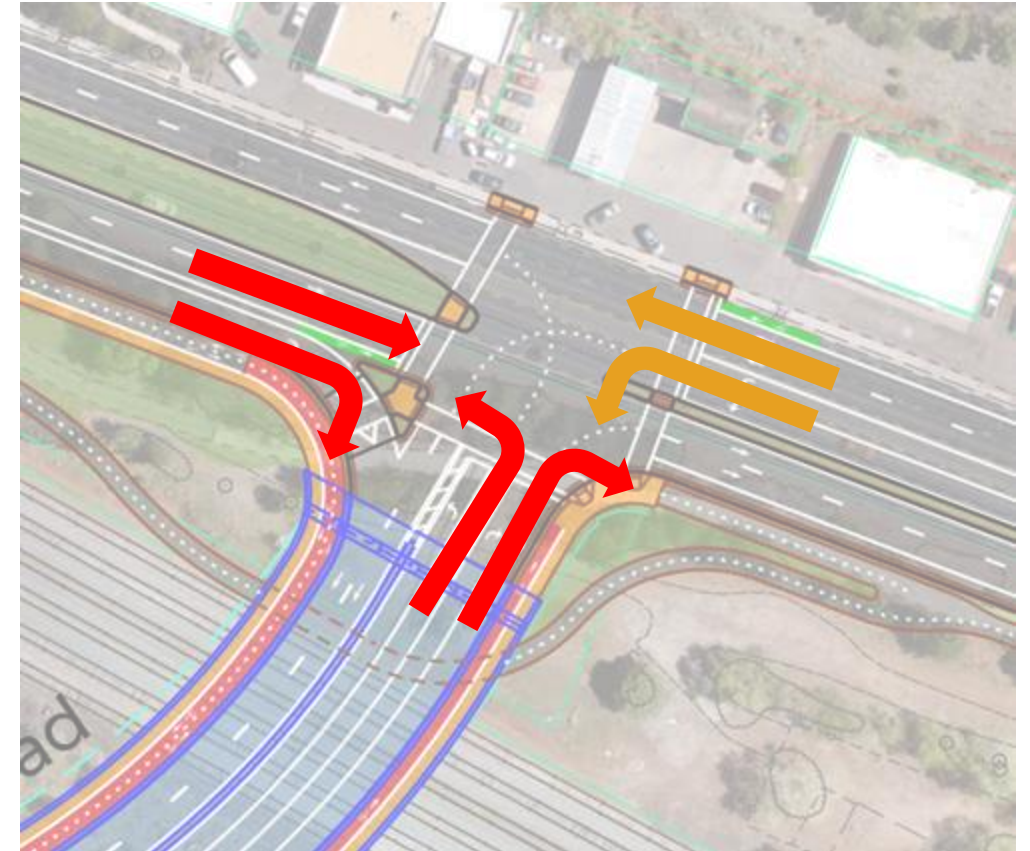




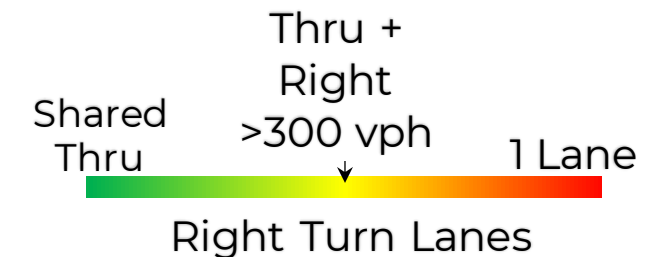
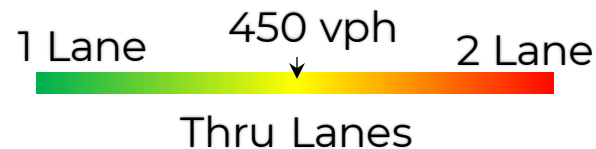
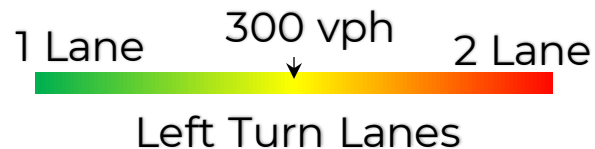
# Intersection Volumes

## 2040 – Build Traffic

- **Separate Right Turn Lanes can be considered.**
- **Thru volumes high enough for more than (1) lane.**
- **Northbound Left and Right Turn volumes are high enough for Double Turn Lanes.**



**US Route 66 & Lone Tree Rd**





# Intersection Selection



# Options to Enhance Multi-Modal Use of Intersection



National Association of City Transportation Officials



## Don't Give Up at the Intersection

Designing All Ages and Abilities  
Bicycle Crossings



National Association of  
City Transportation Officials

May 2019



(Example Only, not a Project Intersection)

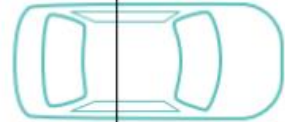




# Options to Enhance Multi-Modal Use of Intersection

## Pavement Markings

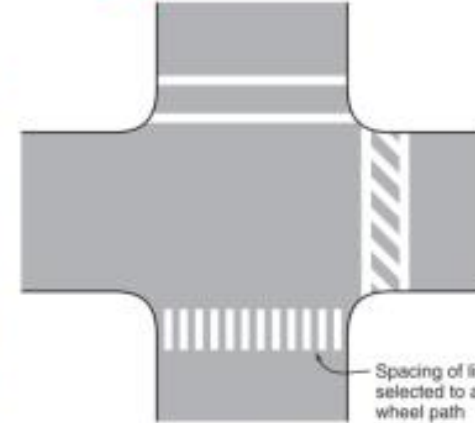
No Stopping  
Standing Zone



No Stop



Bike Yield L  
(optional)



Bikes / Intersection  
Crossing Markings



*High Visibility Crosswalks  
Protected Intersection - Green Bike Crossing  
Bike Symbols w/Arrows for Direction of Travel  
Sharrows for areas of Shared Vehicles/Bikes*

# Options to Enhance Multi-Modal Use of Intersection

## Islands and Medians



## Separated Bike Lane

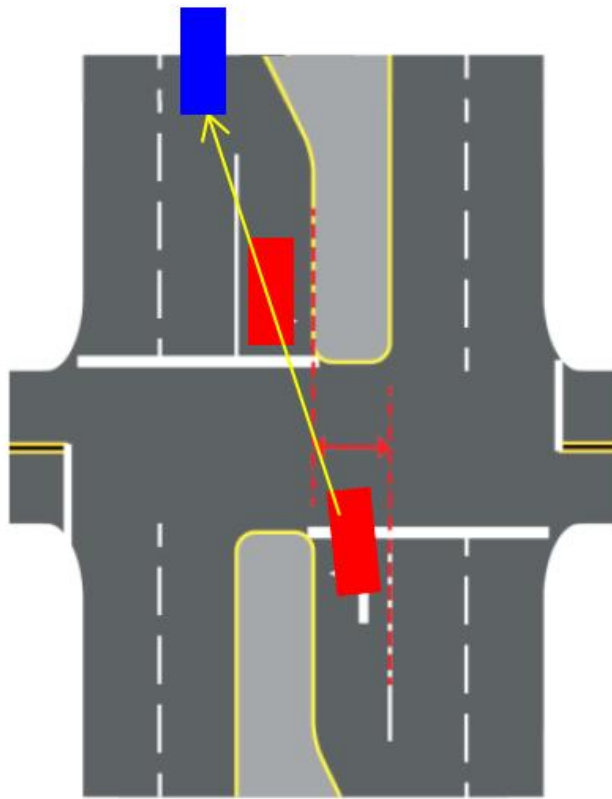


## Curbing Delineators

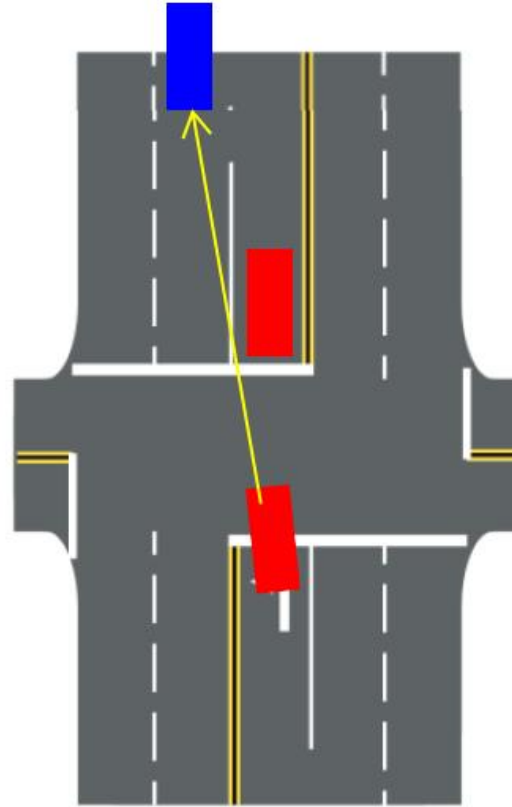


# Options to Enhance Driver Safety at Intersection

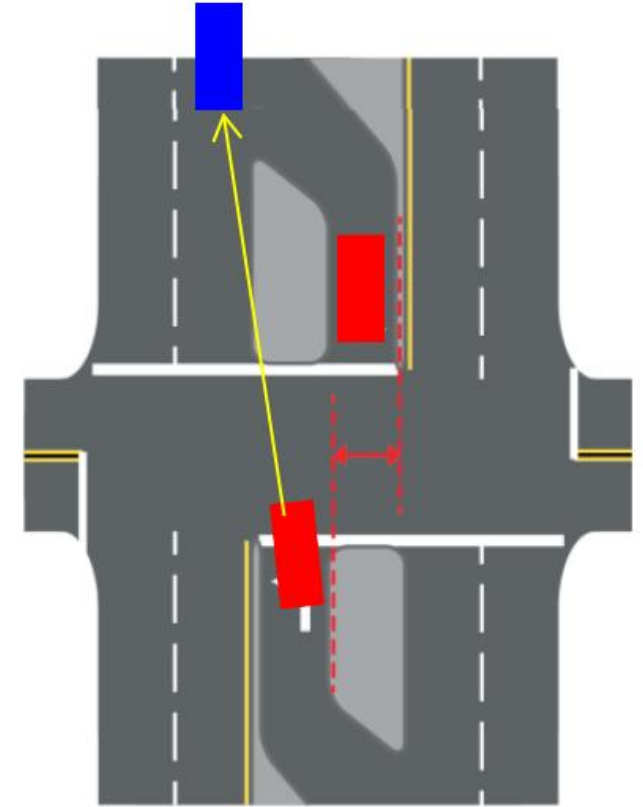
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Negative Offset



Zero Offset



Positive Offset



# Lone Tree Road & Butler Avenue – Intersection *Viable Intersections*

Traditional Intersection – Minor Enhancements



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Viable base

- Efficient
- Lower
- Accor
- Addresses Multi-Modal Concerns





# Lone Tree Road & Butler Avenue – Intersection *Comparisons*

## Traditional Intersection – Full Enhancements

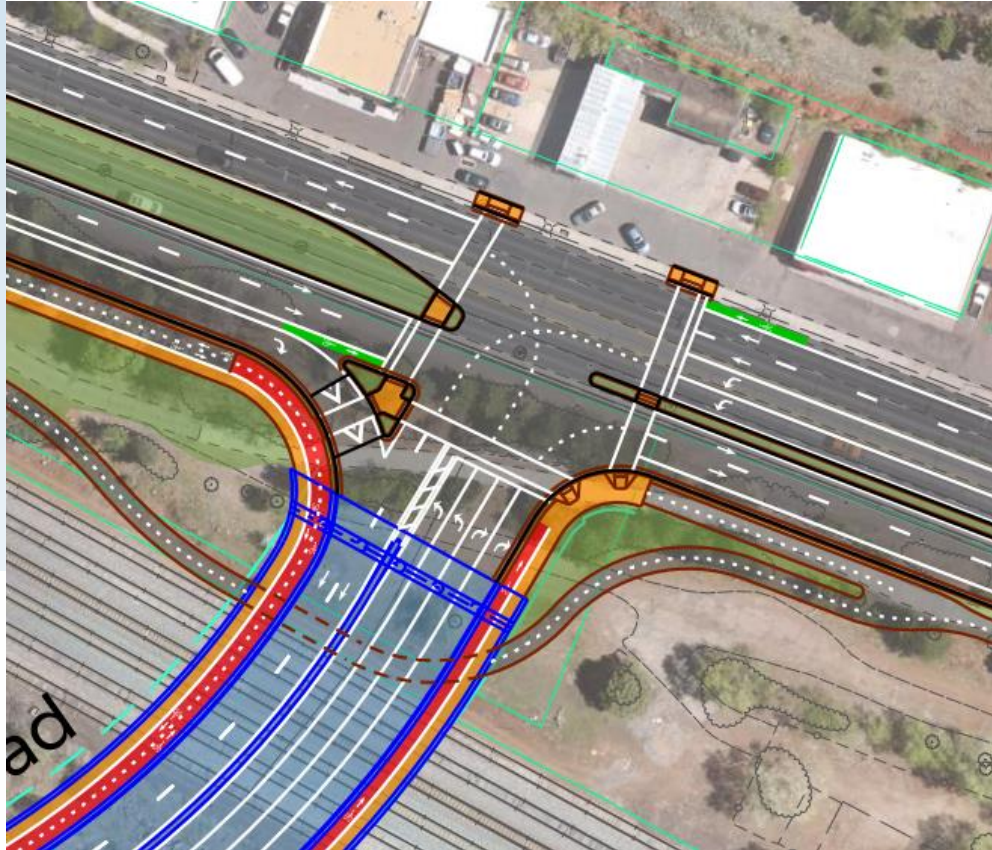
18



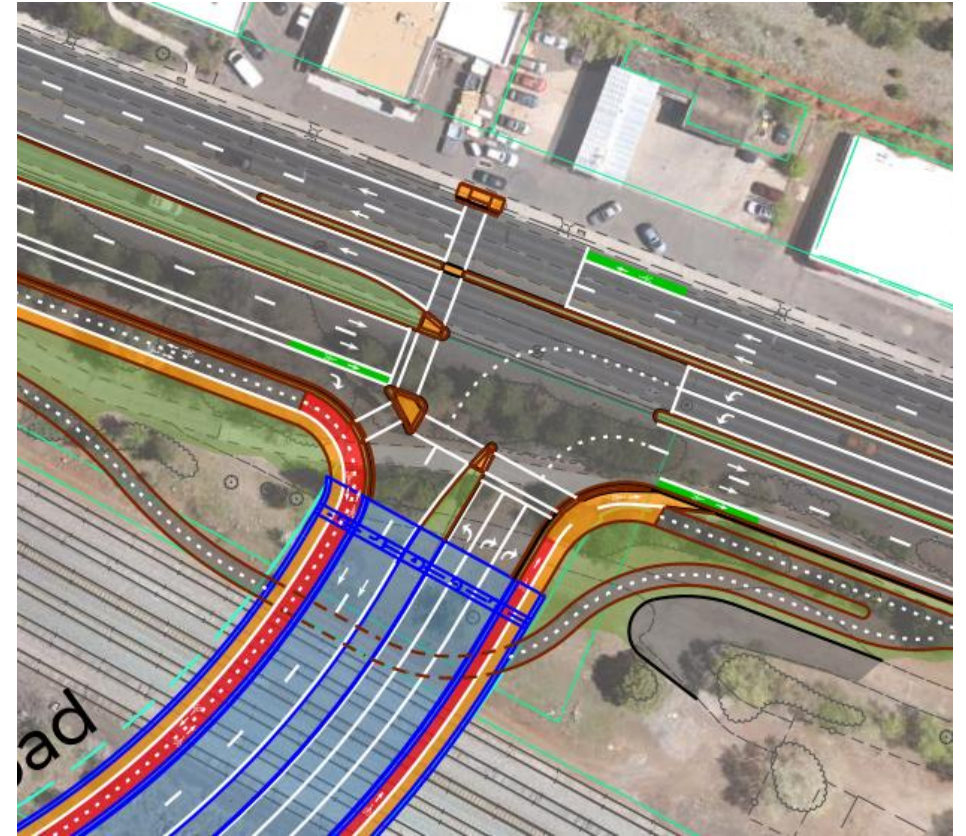


# Lone Tree Road & US-66 – Intersection *Viable Intersections*

Conventional Intersection



Florida "T"





# Lone Tree Road & US-66 – Intersection *Viable Intersections*

Florida T – No Enhancements

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# Lone Tree Road & US-66 – Intersection *Viable Intersections*

**Traditional Intersection – Minor Enhancements**





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# Greenhouse Gases



Estimated Reduction in Greenhouse Gases				
4-Lane Lone Tree Overpass				
Measure	2026-2040, total	2026, annual	2040, annual	2026-2040, annual average
Gallons of Fuel Reduced	 1,896,500	285,900	(16,500)	126,400
GHG emissions avoided (Tons)	 17,000	2,600	(200)	1,100
2-Lane Scenario (For Comparative Purposes)				
Gallons of Fuel Reduced	 1,164,900	122,100	38,700*	77,700
GHG emissions avoided (Tons)	 10,500	1,100	300*	700

\* 2-Lane scenario continues to have positive reductions through 2047

2026 numbers are similar to 2019 No-Growth Volumes for comparison purposes.

Summary: A 4-Lane Corridor will lower Greenhouse Gases compared to existing conditions or a 2-Lane Corridor due to more efficient traffic operations.





# Project Aesthetics



# Aesthetic Incorporation into Design Elements



**Railing Treatments**



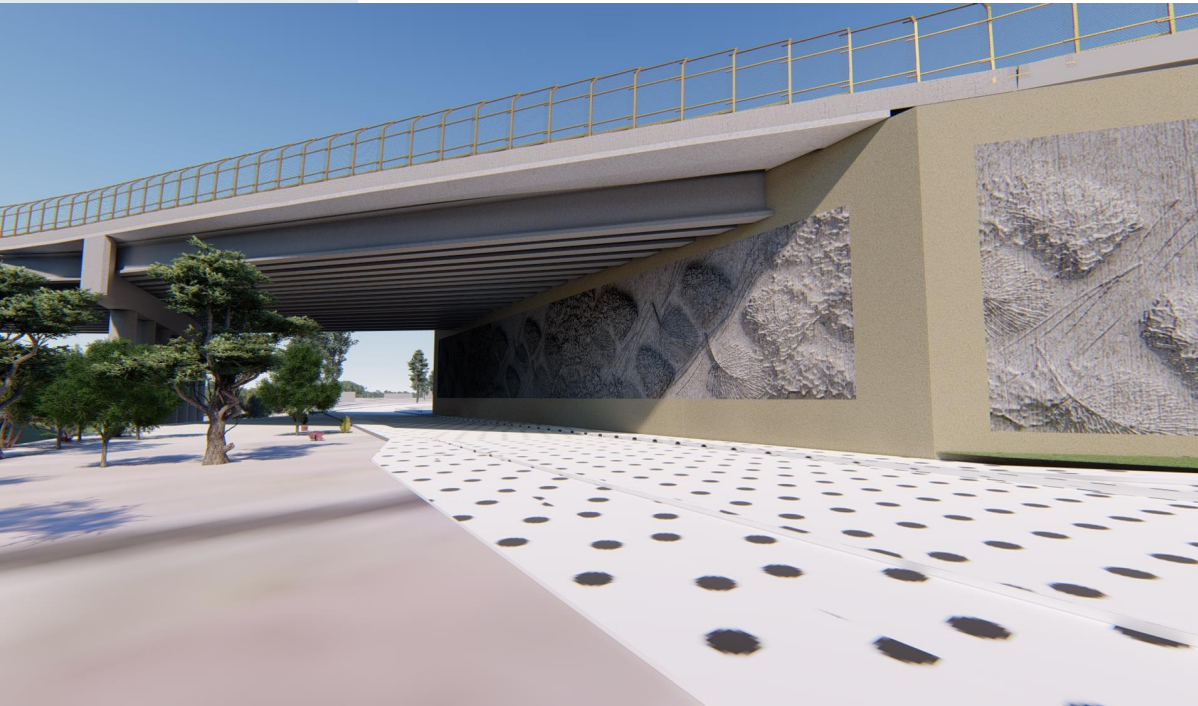
# Aesthetic Incorporation into Design Elements

## Gateway Treatments





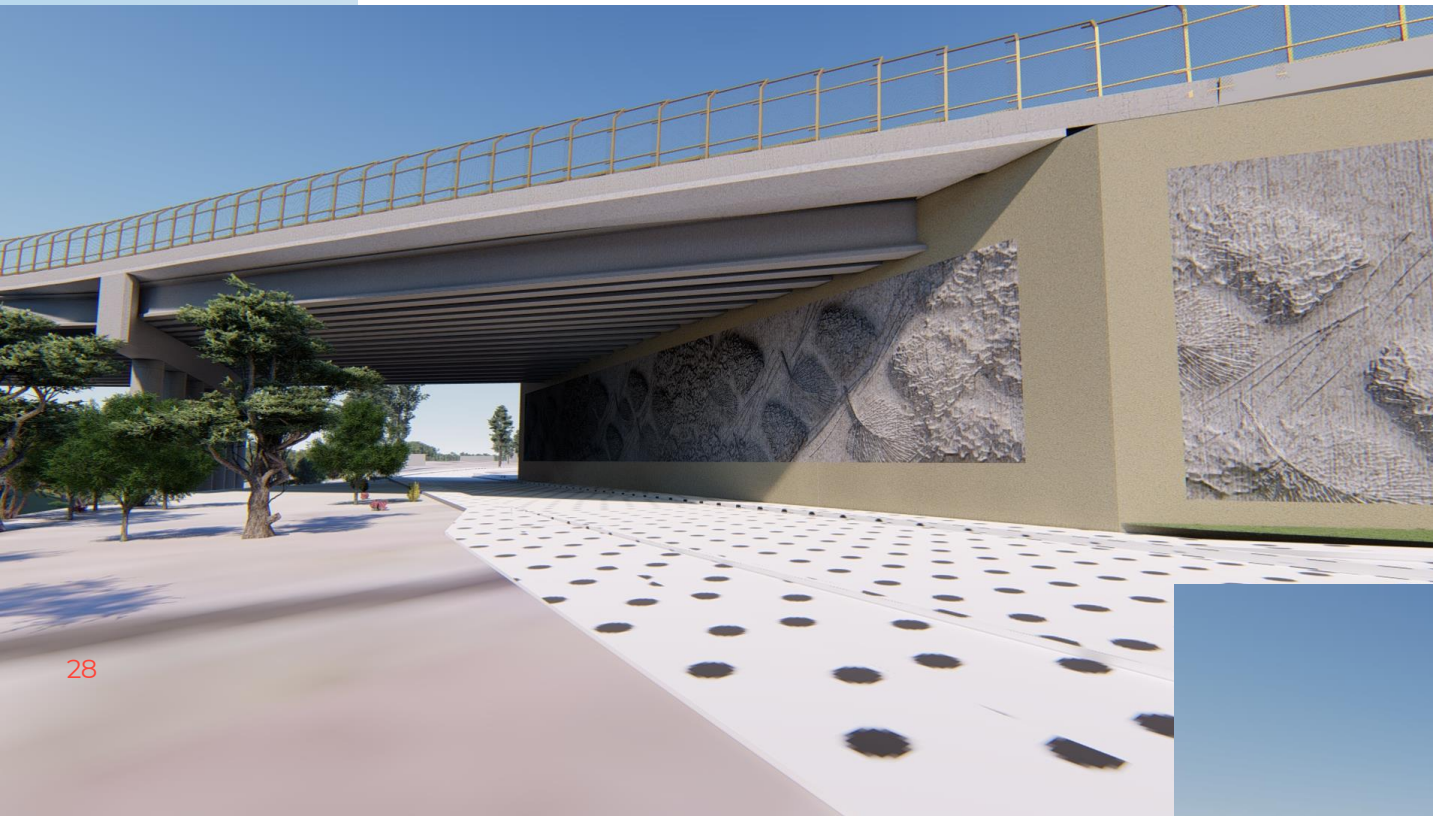
# Aesthetic Incorporation into Design Elements



**Wall Treatments**



# Accommodation of Future Civic Spaces



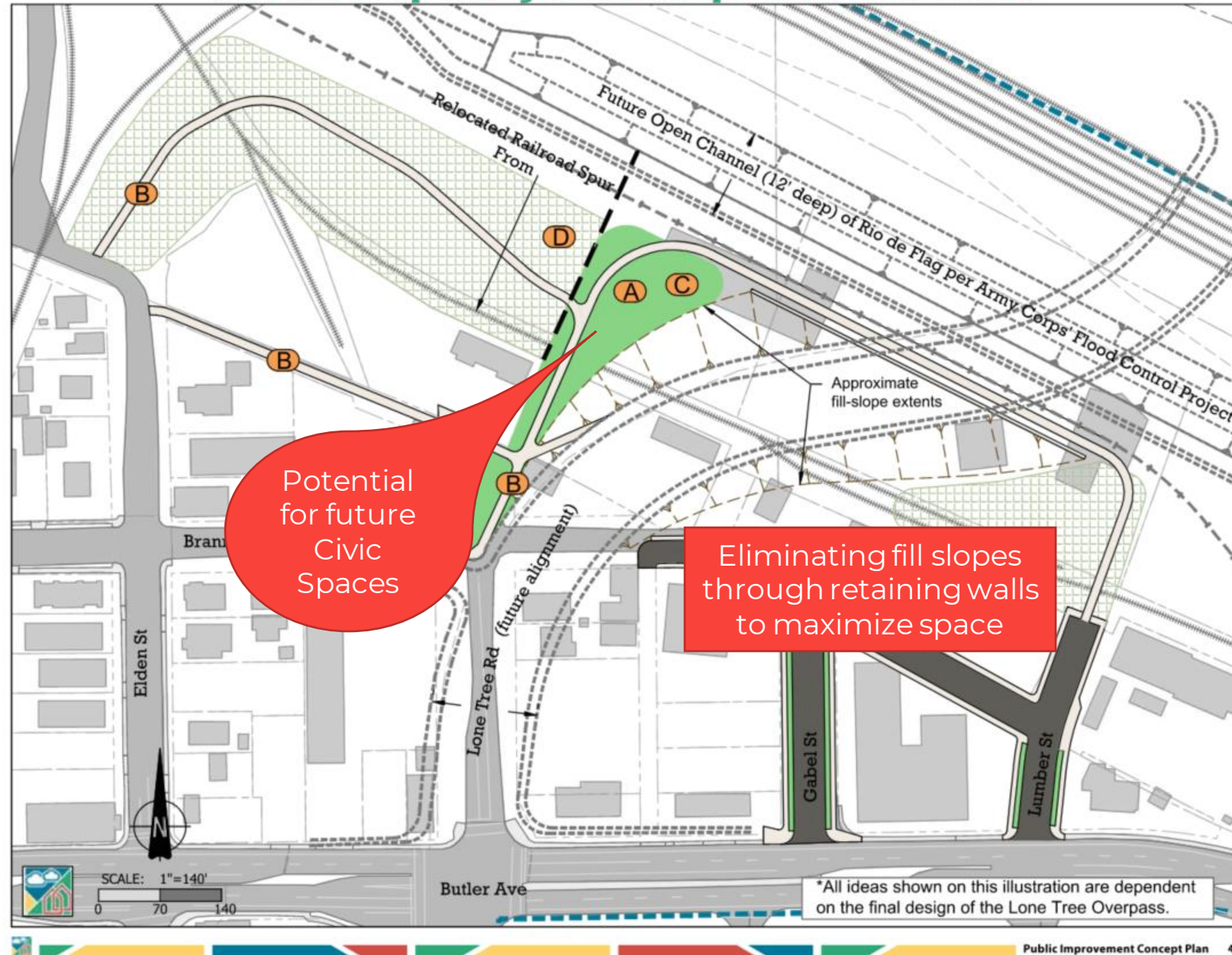
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# Accommodation of Future Civic Spaces

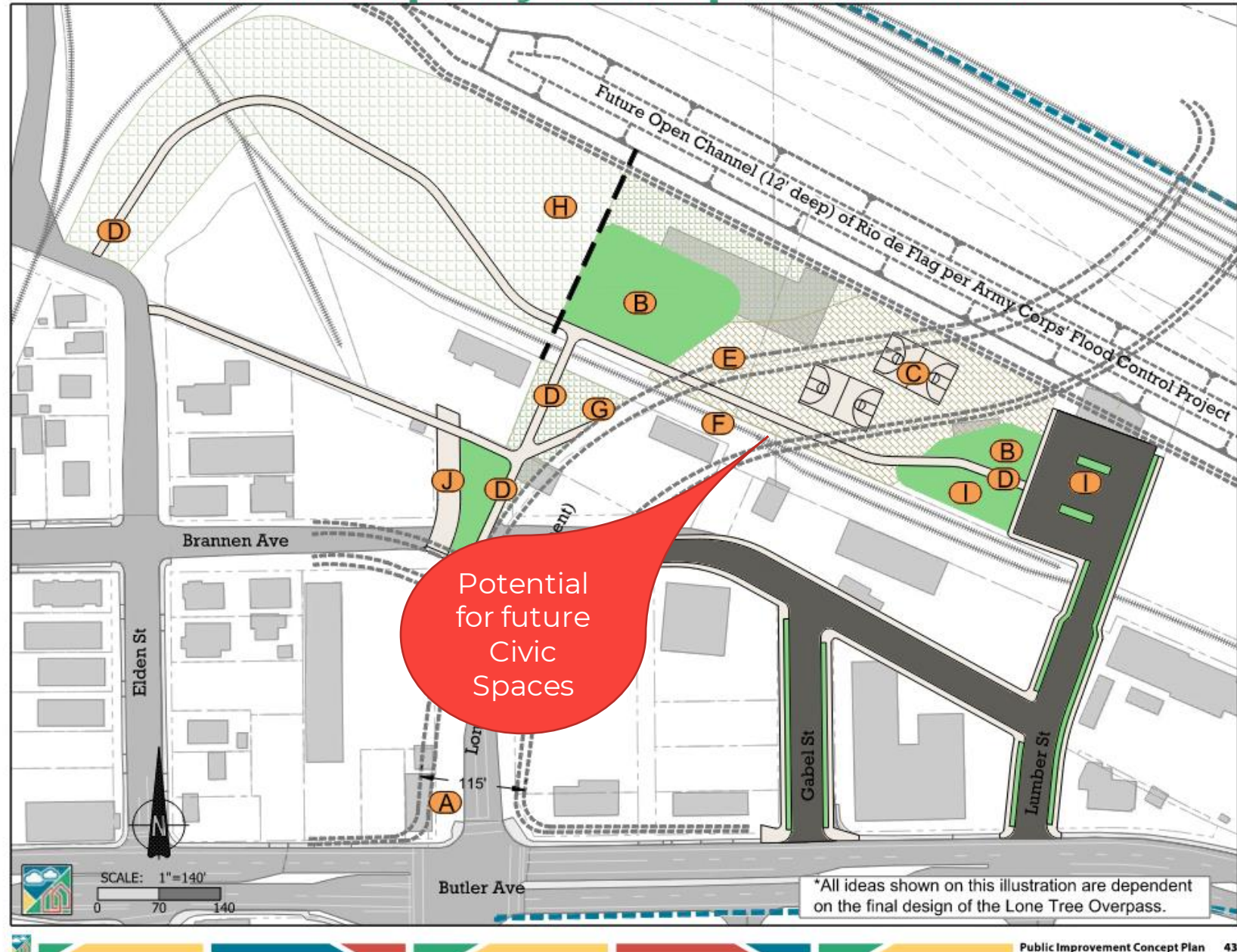
Lone Tree Overpass Larger Park Concept Illustration Scenario 1





# Accommodation of Future Civic Spaces

## Lone Tree Overpass Larger Park Concept Illustration Scenario 2



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# Path Forward





# Lone Tree Schedule

Feb 2021-Nov 2021

## Predesign

- Confirm Project Assessment
- Coordinate with Stakeholders, Commissions, and Public
- Preliminary Decision Making
- Develop Initial Guaranteed Maximum Price
- Public Meeting September 30

Nov 2021-Dec 2022

## Final Design

- Council Meeting in November for Approval of Final Design Amendment
- Continue Coordinating with Stakeholders, Commissions, and Public
- Finish Field Investigations
- Finalize Design
- Finalize Guaranteed Maximum Price

Dec 2022-Nov 2026

## Construction

- Finalize Permits
- Obtain the Construction Maintenance Agreement
- Construct the Project



# Thank you!

[lonetreeoverpass.org](http://lonetreeoverpass.org)

*wsp.com*

